



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,702	02/19/2004	Chen-Hsien Liao	025789-00005	2017
4372	7590	04/16/2007	EXAMINER	
AREN'T FOX PLLC			DHARIA, PRABODH M	
1050 CONNECTICUT AVENUE, N.W.			ART UNIT	PAPER NUMBER
SUITE 400			2629	
WASHINGTON, DC 20036				
SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE		DELIVERY MODE	
3 MONTHS	04/16/2007		PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/780,702	LIAO ET AL.	
	Examiner Prabodh M. Dharia	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 15 February 2007.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-16 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 19 February 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
 5) Notice of Informal Patent Application
 6) Other: _____

1. **Status** Please all the replies and correspondence should be addressed to examiner's new art unit 2629. Receipt is acknowledged of papers submitted on February 15, 2007 under amendments, which have been placed of record in the file. Claims 1-16 are pending in this action.

Response to Amendment

The amendment filed on 02-15-2007 and the new limitations of the amended claims 1,2,9, and 13 does not introduce any new matter into the disclosure. The added material is supported by the original disclosure.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditzik (US 5,966,108) in view of Wang et al. (US 2004/0140964 A1).

Regarding claim 1, Ditzik teaches a position encoded sensing device (Col. 4, lines 46-50) comprising: a display panel (Col. 8, Line 67); a light guiding layer disposed on the display panel, the light guiding layer (Col. 8, Lines 59-61, Col. 4, Lines 46-50) configured to have encoded information therein (Col. 7, Line 67 to Col. 8, Line 12, Col. 4, Lines 46-50); and a transceiver (Col. 4, Lines 46,47 where pen a has receiver or sensor and emitter which is transmitter) for

detecting light (Col. 4, Lines 46-59 the sensor part of the encoding pen acts as receiver or sensor or detector) and the encoded information that are outputted from the light guiding layer (Col. 4, Lines 50-59).

However, Ditzik fails to recite or disclose a light guiding plate, at least one light source disposed at one side edge of the light guiding plate and wherein light guiding plate is configured to have encoded information.

However, Wang et al. discloses a light guiding plate, at least one light source disposed at one side edge of the light guiding plate (please see figures 9A and 9B where light guide plates 920 with two LED light source are at the side edge of the display medium, also light source disposed at one side edge of the light guiding plate is well known in the art Kurosawa et al. (US 6,716,575 B1) filed August 9, 1999, Col. 3, Lines 22-36, see figure 2); wherein light guiding plate is configured to have encoded information (page 14, paragraphs 119,120 teaches the light guide have encoded information, specifically coded maze pattern) and a transceiver for detecting light, and the encoded information that are outputted from the light guiding layer (page 7, paragraph 70, page 14, paragraph 119 teaches input device with transceiver detects light and after processing transmits image data to host).

The reason to combine is to Wang et al. teaching of a light guiding plate, at least one light source disposed at one side edge of the light guiding plate and wherein light guiding plate is configured to have encoded information is able to process and communicate to various kind of host to apply to various display mediums Ditzik fails to disclose (page 7, paragraph 70, page 14, paragraph 119).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Wang et al. in to the teaching of Ditzik to be able to have an user friendly input device that may be used on divergent platforms, while providing a common user interface (page 1, paragraph 2).

Regarding claim 2, Ditzik teaches the light guiding layer (Col. 8, Lines 59-61, Col. 4, Lines 46-50) comprises: the light guiding face is configured to optimally guide the encoded information (Col. 8, Lines 47-64, Col. 4, Lines 46-59) and light from the at least one light source out of the light guiding plate (Col. 8, Lines 47-64, Col. 4, Lines 46-50).

Regarding claim 3, Ditzik teaches the light guiding face is configured to include the encoded information (Col. 8, Lines 47-64, Col. 4, Lines 46-59).

Regarding claim 4, Ditzik teaches the light guiding face includes at least one light guiding surface configured to optimally guide the encoded information and light from the at least one light source out of the light guiding plate (Col. 8, Lines 47-64, Col. 4, Lines 46-59).

Regarding claim 5, Ditzik teaches the light guiding face includes at least one light guiding serrated surface (Col. 13, Lines 62-65, also see figure 9, Col.11, Lines 16-26, see figure 7B, Col. 9, Lines 42-47, Col. 10, Lines 1-6) configured to optimally guide the encoded information (Col. 8, Lines 47-64, Col. 4, Lines 46-59) and light from the at least one light source

out of the light guiding plate (Col. 10, lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59).

Regarding claim 6, Ditzik teaches the light guiding face includes at least one light guiding inverse-V surface configured to optimally guide the encoded information and light from the at least one light source out of the light guiding plate (Col. 13, Lines 62-65, also see figure 9, Col.11, Lines 16-26, see figure 7B, Col. 9, Lines 42-47, Col. 10, Lines 1-6, Col. 5, Lines 40-46).

Regarding claim 7, Ditzik teaches the encoded information comprises at least one display position code information (Col. 1, Lines 25-27).

Regarding claim 8, Ditzik teaches the transceiver (Col. 4, lines 52-59, Lines 46,47) comprises a detector for detecting the light (Col. 4, Lines 46-59 the sensor part of the encoding pen acts as receiver or sensor or detector) and the encoded information that are outputted from the light guiding layer (Col. 8, Lines 47-64, Col. 4, Lines 46-59), and a filter for filtering the light (Col. 10, Lines 60-62)

4. Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ditzik (US 5,966,108) in view of Kurosawa et al. (US 6,716,575 B1).

Regarding claim 9, Ditzik teaches a method of sensing a position on a display (Col. 1, Lines 25-27), said method comprising the steps of: displaying information on a display panel (Col. 4, Lines 46-59); positioning a transceiver proximately to the display panel Col. 1, lines 25-

27, Col. 8, lines 47-64); emitting light from at least one light source of a light guiding layer (Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59); guiding the light with encoded information out of light guiding layer (Col. 10, lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59); detecting the light and the encoded information outputted from the light guiding layer at the transceiver (Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59); and processing the encoded information detected by the transceiver (Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59, Col. 3, Lines 18-22).

However, Ditzik fails to disclose a display panel emitting light from at least one light source disposed at side edge of a light guiding layer.

However, Kurosawa et al. discloses a display panel emitting light from at least one light source disposed at side edge of a light guiding layer (Col. 3, Lines 22-36, see figure 2).

The reason to combine is to teaching of Kurosawa et al. at least one light source disposed at one side edge of the light guiding layer Ditzik fails to disclose (page 7, paragraph 70, page 14, paragraph 119).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Wang et al. in to the teaching of Ditzik to be able to have user friendly input device with clear monitor display.

Regarding claim 10, Ditzik teaches the step of guiding the light comprises the step of: guiding the light with encoded information formed on a light guiding face of the light guiding layer (Col. 8, Lines 47-64, Col. 4, Lines 46-59).

Regarding claim 11, Ditzik teaches the step of guiding the light comprises the step of: guiding the light with display position code information formed on a light guiding face of the light guiding layer (Col. 8, Lines 47-64, Col. 4, Lines 46-59).

Regarding claim 12, Ditzik teaches the step of processing comprises the step of: determining a position of the transceiver with respect to the display panel based on the detected encoded information (Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59, Col. 3, Lines 18-22).

Regarding claim 13, Ditzik teaches a system for sensing a position on a display (Col. 1, Lines 25-30) comprising: a display means for displaying information on a display panel (Col. 3, lines 18-22); a positioning means for positioning (Col. 1, Lines 25-30) a transceiver proximately to the display panel (Col. 8, Lines 47-64, Col. 4, Lines 46-59); an emitting means for emitting light from at least one light source of a light guiding layer (Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59, Col. 3, Lines 18-22); a light guiding means for guiding the light with encoded information out of light guiding layer (Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59, Col. 3, Lines 18-22); a detecting means for detecting the light and the encoded information guided out of the light guiding layer at the transceiver (Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59, Col. 3, Lines 18-22); and a processing means for processing the encoded information detected by the transceiver (Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59, Col. 3, Lines 18-22).

However, Ditzik fails to disclose a display panel emitting light from at least one light source disposed at side edge of a light guiding layer.

However, Kurosawa et al. discloses a display panel emitting light from at least one light source disposed at side edge of a light guiding layer (Col. 3, Lines 22-36, see figure 2).

The reason to combine is to teaching of Kurosawa et al. at least one light source disposed at one side edge of the light guiding layer Ditzik fails to disclose (page 7, paragraph 70, page 14, paragraph 119).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Wang et al. in to the teaching of Ditzik to be able to have user friendly input device with clear monitor display.

Regarding claim 14, Ditzik teaches the light guiding means guides the light with encoded information that are formed on a light guiding face of the light guiding layer (Col. 1, Lines 25-30, Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59, Col. 3, Lines 18-22).

Regarding claim 15, Ditzik teaches the light guiding means guides the light with display position code information formed on a light guiding face of the light guiding layer (Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59, Col. 3, Lines 18-22).

Regarding claim 16, Ditzik teaches the processing means comprises: a determining means for determining a position of the transceiver with respect to the display panel based on the

detected encoded information (Col. 1, Lines 25-27, Col. 10, Lines 40-52, Col. 8, Lines 47-64, Col. 4, Lines 46-59, Col. 3, Lines 18-22).

Response to Arguments

5. Applicant's arguments, see remark, filed 02-15-2007, with respect to the amended claim(s) 1,2,9,13 as being anticipated by Ditzik (US 5,966,108) have been fully considered and are persuasive. However, upon further consideration, a new ground(s) of rejection is made in view of Wang et al. (US 2004/0140964 A1) and Kurosawa et al. (US 6,716,575 B1).

Applicant argues as to prior art of fails to disclose pen/stylus as a transceiver for detecting light and encoded information.

Examiner disagrees as Ditzik discloses pen is coated with a film acts as a optical transceiver, where sensor detects light and signal receiver and emitter acts as a signal emitter. This coated film input encoding means for input device like pen. This pen sensor/emitter film may consist of one or more transparent or opaque coatings or layers that is part of an overall pen input encoding means. The pen input encoding means, as defined herein, includes finger operated touch panels and stylus input encoding means. The pen coating or film can either act as an signal receiver sensor or signal emitter, depending on the design of encoding means, as is well known to those skilled in the art. The encoding signals may be digital or analog signals, and single or alternating in polarity. If the signals are electro magnetic and alternating, the frequency selected may be in the RF, IR or other suitable frequency ranges (Col. 4, Lines 467-59). The pen sensor/emitter film is deposited onto the inside surface of this second faceplate. The pen position encoding sensor or emitter works with a pen or stylus, a pen position encoding electronics unit,

and several electrical wires, connected to the film. The pen may be a stylus with or without a wire. Since the pen and the pen encoding electronics may operate at KHz or RF frequencies, these signals can be electrically coupled through the front fiberoptic plate to the sensor/emitter film (Col. 6, Lines 29-49).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668. The examiner can normally be reached on M-F 8AM to 5PM.

8. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Prabodh Dharia

Partial Signatory Authority

AU 2629



BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600

October 21, 2006